LaTex<Learning Support Weeks for International Students (How to use LaTeX) >

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LaTeX

Support

Learning Desk

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Latex

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1 Introduction

There is a theory which states that if ever anyone discovers exactly what the Universe is for and why it is here, it will instantly disappear and be replaced by something even more bizarre and inexplicable. There is another theory which states that this has already happened.

Figure 1: The Universe

2 Conclusion

"I always thought something was fundamentally wrong with the universe" [1]

References

[1] D. Adams. *The Hitchhiker's Guide to the Galaxy*. San Val, 1995.


```
1  \documentclass{article}
2  \usepackage[utf8]{inputenc}
3
4  \title{Latex}\author{Dohui Woo}\date{\today}
5
6  \usepackage{natbib, graphicx}
7
8  \begin{document}
9
10 \maketitle
11
12 \section{Introduction}
13 There is a theory which states
14 that if ever anyone discovers exactly what the Universe is for
15 and why it is here,
16 it will instantly disappear and be replaced
17 by something even more bizarre and inexplicable.
18 There is another theory
19 which states that this has already happened.
20
21 \begin{figure}[h!]
22 \centering
23 \includegraphics[scale=1.7]{universe}
24 \caption{The Universe}
25 \label{fig:universe}
26 \end{figure}
27
28 \section{Conclusion}
29 ``I always thought something was fundamentally wrong
30 with the universe'' \citep{adams1995hitchhiker}
31
32 \bibliographystyle{plain}
33 \bibliography{references}
34 \end{document}
```

- ✓ Math-friendly
- ✓ References
- ✓ Resources

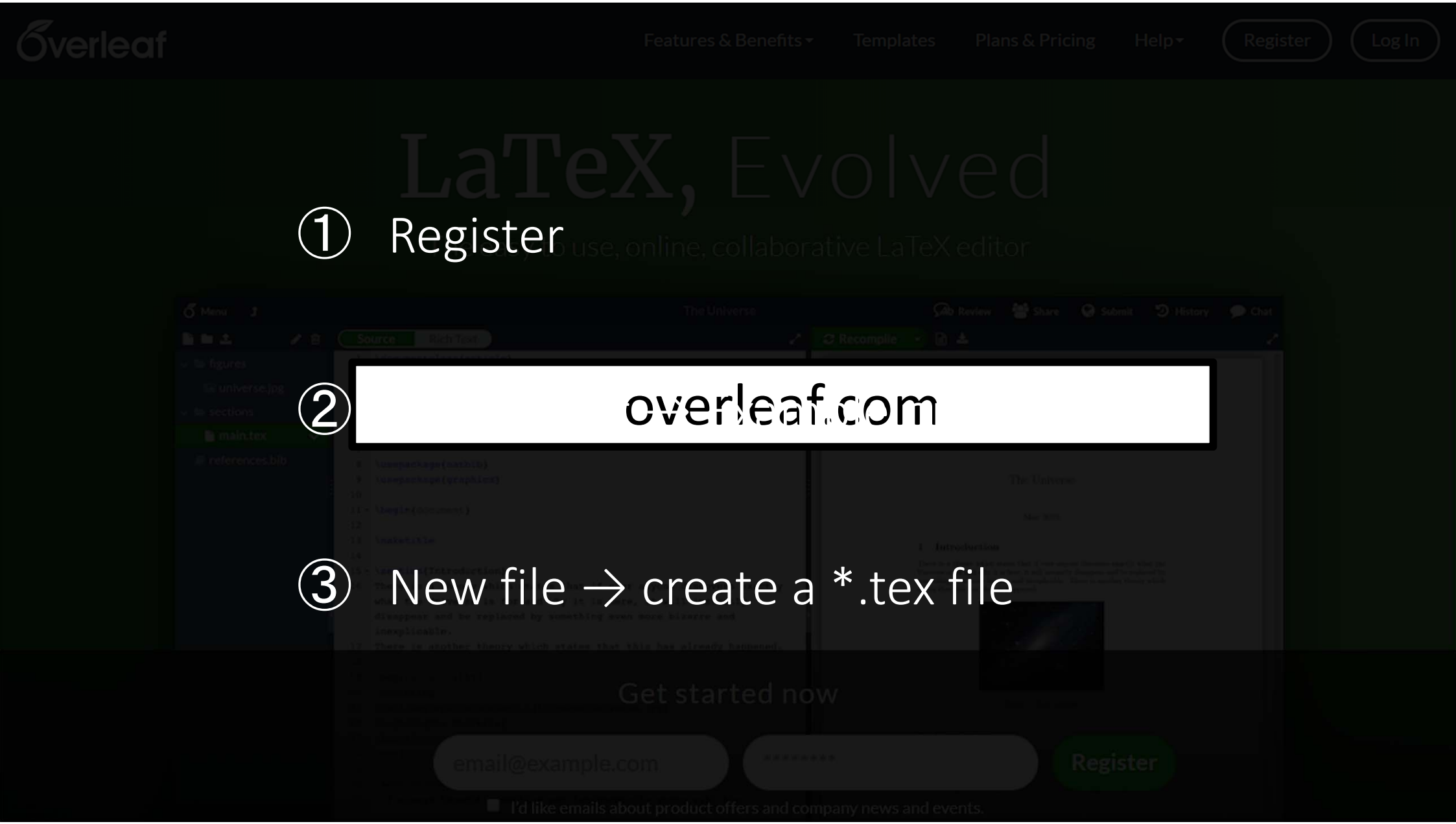
I know it's ugly

Suit for Academia

① Register

② overleaf.com

③ New file → create a *.tex file



Settings

- \
- preamble

\ for special use

---

functions	\tableofcontents
symbols	\alpha
user-specified functions	\newcommand

Preamble

Set up environments you need before you start

- ✓ document class
- ✓ packages
- ✓ others

domument **Class** ¥documentclass{article}

: determines the purpose of the document

- article
- report
- book
- beamer

Packages to import ¥usepackage{kotex}

: brings the functions you need

- geometry
- graphicx
- natbib

&etc., set title, indent length, or line space, or declare your function

Preamble

```
¥documentclass{article}

¥usepackage[hangul]{kotex}
¥usepackage[top = 2cm]{geometry}
¥usepackage{natbib, graphicx}

¥geometry{bottom = 0cm, nofoot}
¥title{An Introduction to LaTex}
¥author{Dohui Woo}
¥date{}
```

- ✓ document class
- ✓ packages
- ✓ others

Preamble

```
¥documentclass{article}
¥begin{document}
    something
    you want
    to write
    in your paper
    like, Auuugh!
¥end{document}
```

✓ document class

unomittable

Package **“geometry “**

options : top, bottom, left, right, ...,
onecolumn, twocolumn,...

¥usepackage[option(s)]{geometry}

Set **Title**, author(s), date

```
¥title{A Striking Title}          % you can't omit this item
                                    when you're making a title
¥author{Alice ¥and Bob}
¥date{¥today}
```

maketitle

```
¥maketitle
```

Contents

- Structure
- Math
- Tables
- Figures
- References

¥section{Set}

¥subsection{The meaning of set and subset}

¥subsubsection{propositoin and condition}

¥paragraph{A proposition is,} a declarative sentence …

¥subparagraph{example} Which of the following …

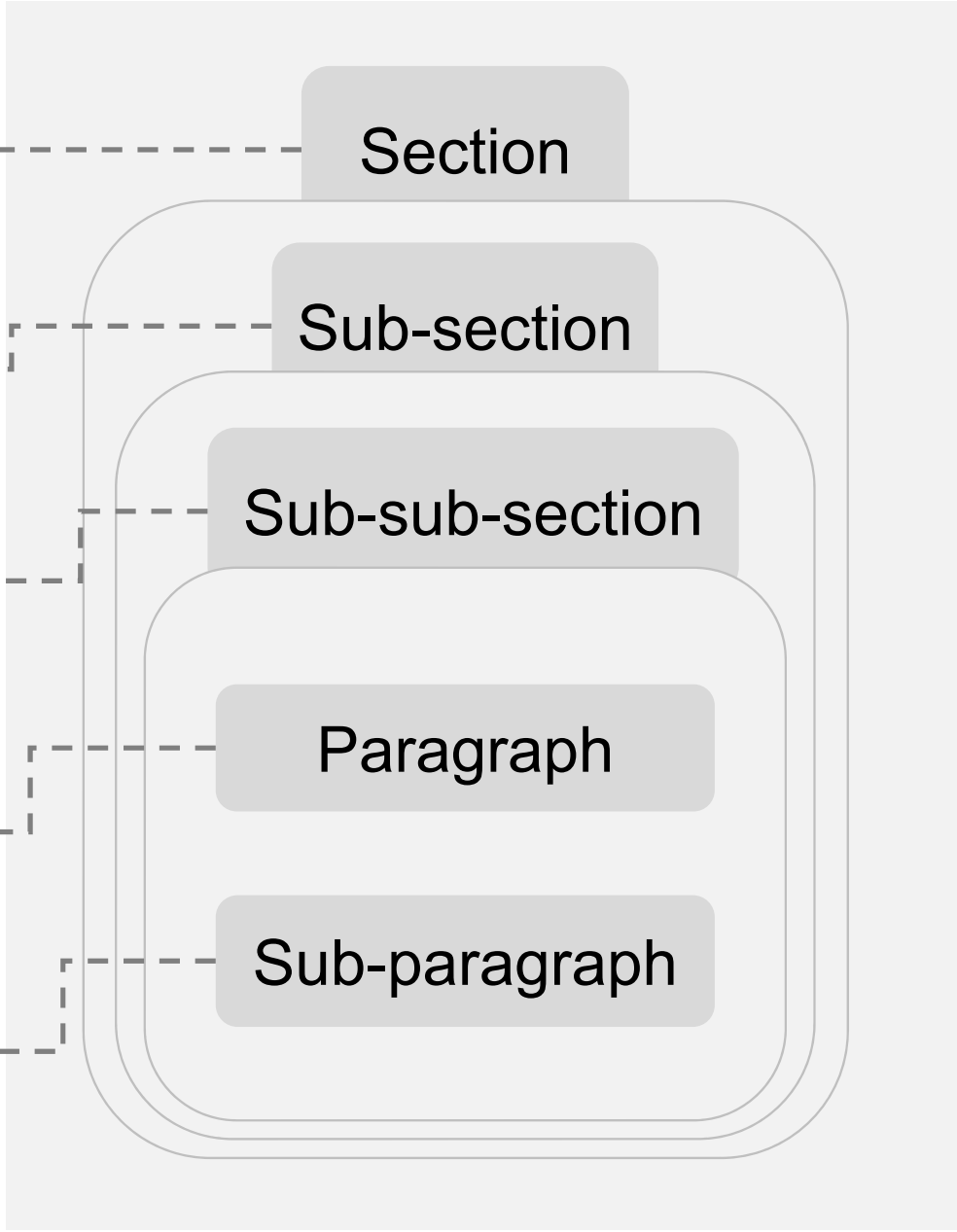
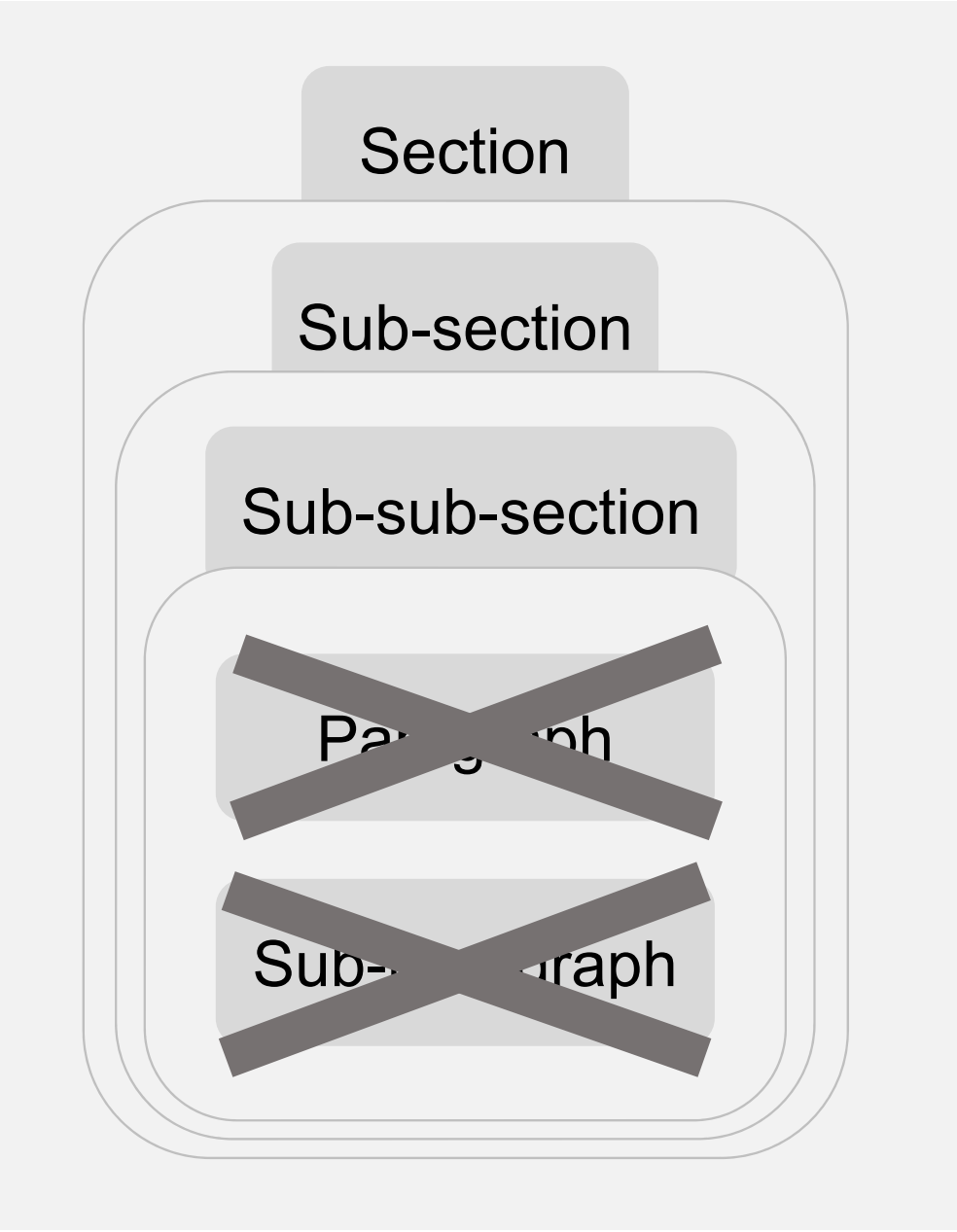


Table of contents

¥tableofcontents



The solution of $ax^2 + bx + c = 0\ (a \neq 0)$ is,

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \qquad (1)$$

```
1  \documentclass{article}
2  \begin{document}
3  ax^2
4  \end{document}
```

Missing $ inserted.

✓ Math mode

- **$ math $: words**

  The kinetic energy **K** of an object with a mass **m** moving with a velocity **v** is

- **\[math \] : phrases**

\[\ frac{1}{2} mv^2 \]

The solutions of $ax^2 + bx + c = 0$ $(a \neq 0)$ is,

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

The solutions of $ax^2 + bx + c = 0$ $(a \neq 0)$ is,

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

✓ tabular environment

```
¥begin{tabular}{||c|r|}
        ¥hline
        A1   & B1   &C1   ¥¥ ¥hline
        A2   & B2   &C2   ¥¥ ¥hline
¥end{tabular}
```

A1	B1	C1
A2	B2	C2

✓ tablesgenerator

✓ table environment

```
¥begin{table}
    ¥caption{your caption}
    ¥begin{tabular}{|l|c|r|}
        ...
    ¥end{tabular}
¥end{table}
```

Table1. your caption

A1	B1	C1
A2	B2	C2

Table1. Prisoners' dilemma

	C	D
C	(1, 1)	(0,10)
D	(10,0)	(1, 1)

- ✓ Package graphicx
- ✓ figure environment

```
¥usepackage{graphicx}
```

```
¥begin{figure}
    ¥includegraphics{universe}
    ¥caption{pic of universe}
¥end{figure}
```

✓ Location : h(ere), t(op), b(ottom), p(age)

```
¥begin{figure}[option]
```

✓ Size : width, height, scale

```
¥includegraphics[option] {figure}
```

Tag a Label

¥begin{figure}
...
¥label{uni}
...
¥end{figure}

Fig. 1: Yay! Universe!

Figure. 1 was taken when I was travelling the universe.

Refer

Figure. ¥ref{uni} is taken when I was travelling the universe.

Figure 1: The Universe

2 Conclusion

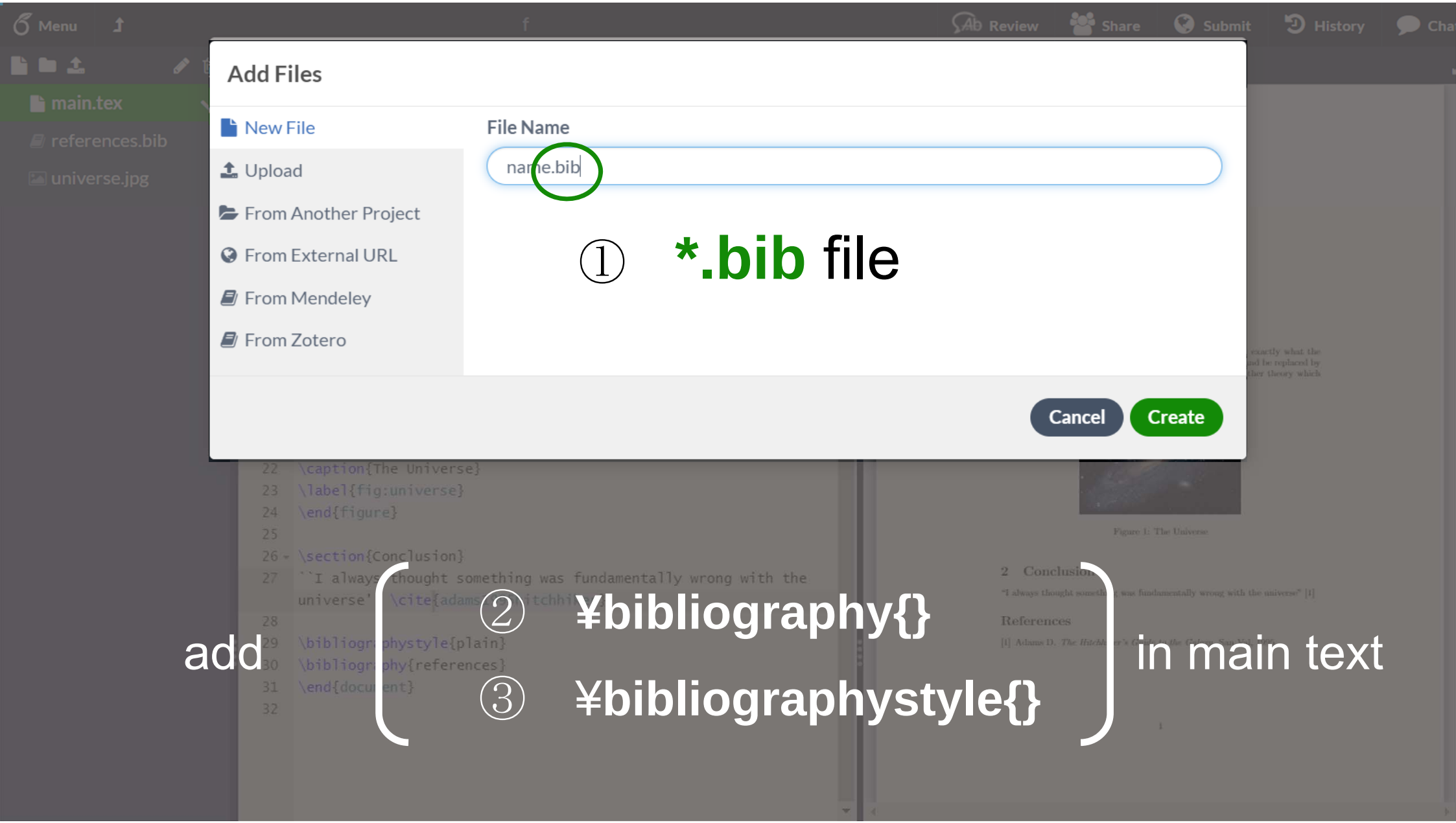
"I always thought something was fundamentally wrong with the universe" [1]

References

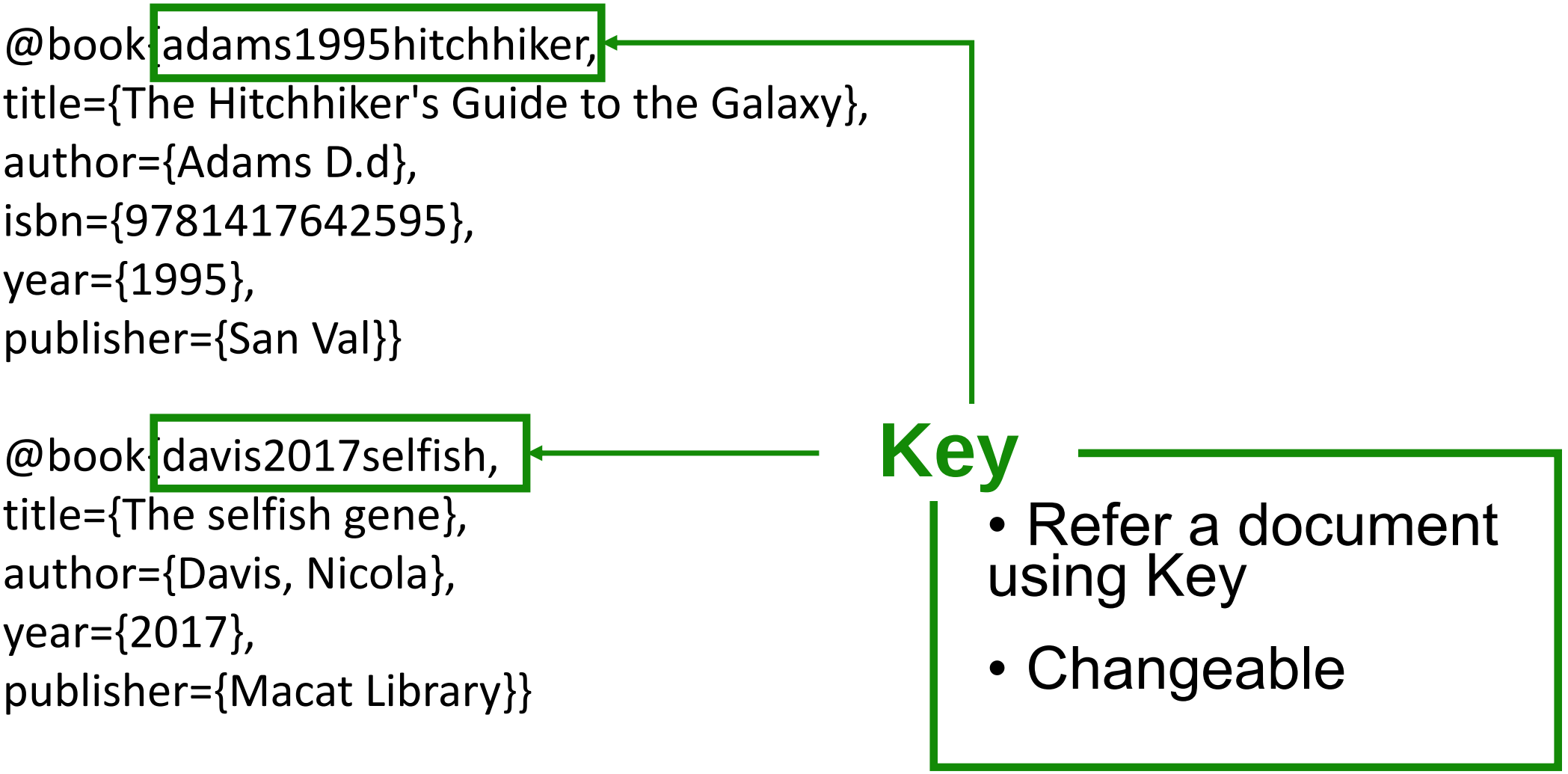
[1] D. Adams. *The Hitchhiker's Guide to the Galaxy*. San Val, 1995.

✓ quote

✓ references


Menu
Review
Share
Submit
History
main.tex
references.bib
universe.jpg
Add Files
New File
Upload
From Another Project
From External URL
From Mendeley
From Zotero
File Name
name.bib
① *.bib file
Cancel
Create
add
② ¥bibliography{}
③ ¥bibliographystyle{}
in main text

```
@book{davis2017selfish,
  title={The selfish gene},
  author={Davis, Nicola},
  year={2017},
  publisher={Macat Library}
}
```


@book{adams1995hitchhiker,
title={The Hitchhiker's Guide to the Galaxy},
author={Adams D.d},
isbn={9781417642595},
year={1995},
publisher={San Val}}
@book{davis2017selfish,
title={The selfish gene},
author={Davis, Nicola},
year={2017},
publisher={Macat Library}}
Key
• Refer a document using Key
• Changeable

Numbered

¥bibliographystyle{plain}

cite with **p**arentheses ¥citep{Key} ▶ [1]

Author-year

¥bibliographystyle{plainnat}

¥citep{Key} ▶ [Alonso et al., 2008]

cite within **t**ext ¥citet{Key} ▶ Alonso et al. [2008]


Learning support desk
1p.m. ~ 7p.m.
on weekdays

Japanese

- ✓ LaTeX
- ✓ Add “latexmkrc”

```
$latex = 'platex';
$bibtex = 'pbibtex';
$dvipdf = 'dvipdfmx %O -o %D %S';
$makeindex = 'mendex %O -o %D %S';
```

www.overleaf.com/learn/latex/Japanese ←copy and paste

α	¥alpha	
a^x	¥a^x	
$\sqrt{a}$	¥sqrt{a}	**sq**uare **r**oo**t**
$\frac{1}{2}$	¥frac{1}{2}	**frac**tion
$\neq$	¥neq	**n**ot **eq**ual to
$\geq$	¥ge	**g**reater than or **e**qual to

- **¥begin{equation}...¥end{equation}**